AMENDMENT(S) TO THE SPECIFICATION

Page 1, beginning at line 1, please amend the heading as follows:

~~Lift~~ Elevator Installation

Page 1, after line 1 please insert the following heading and paragraph:

PRIORITY CLAIM

This is a U.S. national stage of application No. PCT/EP2204/014723, filed on December 27, 2004. Priority is claimed on that application and on the following application:

Country: Europe, Application No.: 04405008.6, Filed: January 6, 2004.

BACKGROUND OF THE INVENTION

Page 1, beginning at line 2, please amend the paragraph as follows:

Subject of the invention is ~~a lift~~ an elevator installation ~~as defined in the patent claims~~.

Page 1, beginning at line 3, please amend the paragraph as follows:

~~Lift~~ Elevator installations of the kind according to the invention usually comprise ~~a lift~~ an elevator cage and a counterweight, which are movable in ~~a lift~~ an elevator shaft or along free-standing guide devices. For producing the movement the ~~lift~~ elevator installation comprises at least one drive with at least one respective drive pulley, which, by way of support means and/or drive means, support the ~~lift~~ elevator cage and the counterweight and transmit the required drive forces to these.

Page 1, beginning at line 10, please amend the paragraph as follows:

~~A lift~~ An elevator system without an engine room is known from WO 03/043926, in which wedge ribbed belts are used as support means for the ~~lift~~ elevator cage. These belts comprise a belt body of flat belt form which is produced from a resilient material (rubber, elastomer) and which has, on its running surface facing the drive pulley, several ribs extending in the belt longitudinal direction. These ribs co-operate with grooves, which are formed to be complementary thereto, in the

periphery of driving or deflecting pulleys (termed belt pulleys in the following) in order on the one hand to guide the wedge ribbed belt on the drive pulleys and on the other hand to increase the traction capability between the drive pulley and the support means. The ribs and grooves have triangular or trapezium-shaped, i.e. wedge-shaped, cross-sections. Tensile carriers consisting of metallic or non-metallic strands are embedded in the belt body of the wedge ribbed belt and oriented in the belt longitudinal direction, which tensile carriers impart the requisite tensile strength and longitudinal stiffness to the support means.

Page 1, beginning at line 23, please amend the paragraph as follows:

The wedge-ribbed belts known from WO 03/043926 have certain disadvantages, i.e. they are not optimally adapted to the requirements of a support means for ~~lift~~ elevator cages. Such support means have to have a high load-bearing capability and a low longitudinal elasticity for smallest possible dimensions and smallest possible own weight and in that case be able to be guided over driving and deflecting pulleys with smallest possible diameters.

Page 2, before the paragraph beginning at line 14, please insert the following heading:

SUMMARY OF THE INVENTION

Page 2, beginning at line 14, please amend the paragraph as follows:

The present invention is based on the task of creating ~~a lift~~ an elevator installation of the afore-described kind in which the stated disadvantages are not present, i.e. that the ~~lift~~ an elevator installation comprises a support means of flat belt form with ribs, which in the case of use with minimum belt pulley diameters and for a predetermined load-bearing capability has minimum dimensions and minimum weight, wherein the tensile carriers and the belt body are exposed to the smallest possible loads so that an optimum service life is guaranteed

Page 2, beginning at line 21, please delete the paragraph in its entirety.

Page 2, beginning at line 23, please amend the paragraph as follows:

~~The proposed solution consists substantially in that in the case of a lift installation there is used~~ Pursuant to this task, one aspect of the present invention resides in an elevator installation having a support means of flat belt form which has at least on a running surface facing the drive pulley several ribs extending parallelly in the belt longitudinal direction, wherein at least two tensile carriers oriented in the belt longitudinal direction are present per rib and the sum of the cross-sectional areas of all tensile carriers amounts to at least 25%, preferably 30% to 40%, of the total cross-sectional area of the support means. For ascertaining the total cross-sectional area of the tensile carriers, the cross-section defined by the outer diameter thereof is to be taken into account.

Page 3, beginning at line 10, please delete the paragraph in its entirety:

Page 5, before line 1, please insert the following heading

BRIEF DESCRIPTION OF THE DRAWINGS

Page 5, before the paragraph beginning at line 13, please insert the following heading:

DETAILED DESCRIPTION OF THE INVENTION

Page 5, beginning at line 13, please amend the paragraph as follows:

Fig. 1 shows a section through ~~a lift~~ an elevator system according to the invention installed in ~~a lift~~ an elevator shaft 1. Essentially illustrated are:

- a drive unit 2, which is fixed in the ~~lift~~ elevator shaft 1, with a drive pulley 4.1
- ~~a lift~~ an elevator cage 3, which is guided at cage guide rails 5, with cage support rollers 4.2 mounted below the cage floor 6
- a counterweight 8, which is guided at counterweight guide rails 7, with a counterweight support roller 4.3
- a support means, which is constructed as a wedge ribbed belt 12, for the ~~lift~~ elevator cage 3

and the counterweight 8, which support means transmits the drive force from the drive pulley 4.1 of the drive unit 2 to the ~~lift~~ elevator cage and the counterweight.

(In the case of an actual ~~lift~~ elevator installation, at least two wedge ribbed belts arranged in parallel are present)

Page 5, beginning at line 25, please amend the paragraph as follows:

The wedge ribbed belt 12 serving as support means is fastened at its end below the drive pulley 4.1 to a first support means fixing point 10. From this it extends downwardly to the counterweight support roller 4.3, loops around this and extends out from this to the drive pulley 4.1, loops around this and runs downwardly along the cage wall at the counterweight side, loops around, at both sides of the ~~lift~~ elevator cage, a respective cage support roller 4.2, which is mounted below the ~~lift~~ elevator cage 3, in each instance by 90° and runs upwardly along the cage wall remote from the counterweight 8 to a second support means fixing point 11.

Page 6, beginning at line 4, please amend the paragraph as follows:

The plane of the drive pulley 4.1 is arranged at right angles to the cage wall at the counterweight side and its vertical projection lies outside the vertical projection of the ~~lift~~ elevator cage 3. It is therefore important that the drive pulley 4.1 has a small diameter, so that the spacing between the cage wall at the left side and the wall of the ~~lift~~ elevator shaft 1 opposite thereto can be kept as small as possible. Moreover, a small drive pulley diameter enables use of a drive motor without transmission and with a relatively small drive torque as drive unit 2.

Page 6, beginning at line 18, please amend the paragraph as follows:

In the case of support means under-looping below the ~~lift~~ elevator cage 3 no lateral guidance is given between the cage support rollers 4.2 and the wedge ribbed belt 12, since the ribs of the wedge ribbed belt are disposed on its side remote from the cage support rollers 4.2. In order to nevertheless ensure lateral guidance of the wedge ribbed belt there are mounted at the cage floor 6 two guide rollers 4.4 provided with grooves which co-operate with the ribs of the wedge ribbed belt 12 as lateral guidance.

Page 6, beginning at line 24, please amend the paragraph as follows:

Fig. 2 shows a section of a wedge ribbed belt 12.1, which serves as support means, of ~~a lift~~ an elevator installation according to the invention. The belt body 15.1, the wedge-shaped ribs 20.1 and the tensile carriers 22 embedded in the belt body can be recognised.

Page 7, beginning at line 6, please amend the paragraph as follows:

Two round tensile carriers 22 are associated with each of the wedge-shaped ribs 20.1 of the wedge ribbed belt 12.1 and are so dimensioned that they can in common transmit the belt loads arising in the wedge ribbed belt per rib. These ~~belts~~ belt loads are on the one hand the transmission of pure tensile forces in the belt longitudinal direction. On the other hand, in the case of looping around of a belt pulley 4.1 - 4.4 forces are transmitted in a radial direction from the tensile carriers via the belt body to the belt pulley. The cross-sections of the tensile carriers 22 are so dimensioned that these radial forces do not cut through the belt body 15.1. In the case of looping around of a belt pulley additional bending stresses arise in the tensile carriers as a consequence of the curvature of the wedge ribbed belt resting on the belt pulley. In order to keep these additional bending stresses in the tensile carriers 22 as small as possible the forces to be transmitted per rib 20.1 are distributed to two tensile carriers, although a single tensile carrier arranged in the centre of the rib would enable a somewhat smaller overall thickness of the wedge ribbed belt.

Page 7, beginning at line 27, please amend the paragraph as follows:

The wedge ribbed belt illustrated in Fig. ~~2~~ 3 fulfils this criterion. For ascertaining the total cross-sectional area of all tensile carriers the cross-section, which is defined by outer diameter DA shown in Fig. 5, of the wire cable is to be taken into consideration.

Page 8, beginning at line 3, please amend the paragraph as follows:

Fig. 4 shows a variant 12.2 of the wedge ribbed belt, in which the wedge-shaped ribs 20.2 are wider than in the case of the variant 12.1 illustrated in Fig. ~~2~~ 3 and each have three associated tensile carriers. All other characteristics stated in connection with the variant according to Fig. ~~2~~ 3 are similarly present in the case of this variant. Such a wedge ribbed belt has the advantage that the corresponding belt pulleys 4.1, 4.3, 4.4 are somewhat easier to produce.

Page 8, beginning at line 9, please amend the paragraph as follows:

The wedge ribbed belts illustrated in Figs. 3 and 4 and serving as support means have a preferred flank angle β of approximately 90°. The angle present between the two flanks of a wedge-shaped rib of the belt body is termed flank angle. As already explained in the description of advantages tests have shown that the flank angle has a critical influence on the development of noise and the creation of vibrations and that flank angles β of 80° to 100° are optimal, and from 60° to 120° usable, for a wedge ribbed belt provided as ~~lift~~ elevator support means.

Page 9, beginning at line 5, please amend the paragraph as follows:

Fig. 5 shows in enlarged illustrated a cross-section through a preferred form of embodiment of a tensile carrier 22, which is predominantly suitable for a wedge ribbed belt for use in ~~a lift~~ an elevator installation according to the invention. The tensile carrier 22 is a steel wire cable which is twisted from in total 75 individual wires 23 with extremely small diameters.

Page 9, beginning at line 9, please amend the paragraph as follows:

In order to achieve a long service life of the support means in ~~lift~~ elevator installations with belt pulleys of small diameter it is of substantial advantage if the steel wire cables used as tensile carriers 22 consist of at least 50 individual wires.